

REMARKS

Applicant appreciates the thorough consideration provided in the present application and the courtesies of the personal interview conducted on June 26, 2003 with Examiner Wendy Boss. During this interview, the rejections under 35 U.S.C. § 112, 35 U.S.C. § 102(b), and 35 U.S.C. § 103(a) were discussed. These matters will be discussed in greater detail hereinafter and have been also listed in the Interview Summary created on June 26, 2003.

Claims 1-2 and 4-29 are currently pending in the instant application. Claims 1 and 13 are independent. Claims 1, 24 and 28 have been amended. Claim 29 has been added and claim 3 has been cancelled. Reconsideration of the present application is earnestly solicited.

Claim Rejections Under 35 U.S.C. 112, First Paragraph

Claim 28 stands rejected under 35 U.S.C. § 112, first paragraph for allegedly failing to provide adequate support in the specification for the claimed subject matter. This rejection is respectfully traversed.

Applicants respectfully submit that the subject matter is fully supported by the original written description, including but not limited to page 17, paragraph 0051 of the specification. The specification clearly describes that this "surface could be used as a growing surface. The particulate material

could employ materials that enhance crop growing, such as material that retains moisture for the plants, and material that allows for strong plant root development." (see paragraphs 0050-0051 of the present application) Accordingly, this rejection should be withdrawn.

Claim Rejections Under 35 U.S.C. 112, Second Paragraph

Claim 22 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the claimed invention. This rejection is respectfully traversed. Applicant submits that the symbols A, T and L have been described by the claims as being directed toward the spacing between the rows (A), thickness of the layer of particulate material (T) and length of the ribbon measured from the flexible backing (L), respectively.

In addition, the relationship between (A) and (T) and (T) and (L) is fully described in the original written description, including but not limited to pages 13 and 14, paragraph 0044 of the specification. For example, for a ribbon length (L) of 5 inches, the thickness (T) would then be 3 and 1/3 inches (2/3 of L) and the row spacing would be 2.5 inches (or 1/2 of L or 3/4 of T). The ratio defines the interrelationship between all three parameters of row spacing, thickness and length in a single equation, e.g., as described in paragraph 0044 of the present application. Accordingly, this rejection should be withdrawn.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-6, 13, 14, 16, 21-25, 27 and 28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Prevost (Canadian Patent No. 2,095,158). Claims 13, 14, 16, 17, 22, 23, 25, 27 and 28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tomarin (U.S. Patent No. 4,637,942). These rejections are respectfully traversed.

In light of the foregoing amendments to the claims, Applicant respectfully submits that these rejections have been obviated and/or rendered moot. Applicant submits that the prior art of record fails to teach or suggest each and every element of the unique combination of elements of the claimed invention. Accordingly, these rejections should be withdrawn.

With respect to claim 1, Applicant submits that the prior art of record fails to teach or suggest the combination of elements of the claimed invention, including the limitation(s) of *"the rows of ribbons spaced apart from each other from between 5/8 inch and 2-1/4 inches, and the length of the ribbons, extending upwardly from the backing member, is at least twice the dimension of the spacing between the rows of ribbons, the surface including a relatively thick layer of particulate material on the backing member supporting the ribbons in a relatively upright position relative to the backing member, wherein the*

particulate layer has a thickness of substantially two-thirds the length of the ribbons." (emphasis added) Accordingly, this rejection should be withdrawn.

With respect to claim 13, Applicant submits that the prior art of record fails to teach or suggest the combination of elements of the claimed invention, including the limitation(s) of "*whereby the relationship of the length of the ribbons and the spacing between the rows is $2A \leq L$ such that the length of the ribbons is at least twice the spacing; and the particulate material having a thickness T of substantially $2/3$ the length of the ribbons, when A is the spacing between the rows, L is the length of the ribbon measured from the flexible backing and T is the thickness of the layer of particulate material.*" (emphasis added) Accordingly, this rejection should be withdrawn.

In the claimed invention of claims 1 and 13, the limitations of the interrelation between the width of the spacing between the rows, the length of the ribbons, or blades of artificial grass, and the thickness of the infill are claimed. This relationship is defined in claim 13 by the claimed formula, i.e., $2A \leq L$, and the thickness of the infill in this relationship is described as $2/3$ the length (L).

As described by both Prevost ('158) and the present application, it is known that the dimension of the spacing between the rows of ribbons can be varied to conform to various sports or other activities. The width will depend on the aggressiveness of the activity above the field. For instance, non-contact

sports such as golf or tennis will require a narrower spacing, while football, rugby, and even horse racing will require a larger spacing between the rows of infill.

In the claimed invention, the interrelationship of the various parameters allows one to determine immediately the required length of the ribbons, and the corresponding thickness of the infill based merely on the appropriate spacing that has been determined for the intended playing surface.

In contrast, Prevost ('158) did not anticipate such a relationship. Although Prevost understood the advantages of being able to vary the spacing between the rows of grass, Prevost did not, at the time of the ('158) Canadian Patent, foresee that the length of ribbons and thickness of the infill also had to vary by necessity, proportionally with the spacing.

The reason the length of the ribbons must vary with the spacing is to ensure that, no matter what the spacing, the length of ribbons will always have enough free length above the infill to fold over and cover the infill between the rows, thus providing more protection, from sand and other particulate materials in the infill, e.g., for athletes who might fall on the surface and thereby minimize skin abrasion. Of course the thickness of the infill also has to vary precisely with the length of the ribbon length to allow enough free ribbon to protrude from the infill, while still allowing for sufficiently thick infill to

provide for shock absorption, playability and the other factors described in the present application.

Another advantage of the claimed invention is in the use of the synthetic turf as a growing medium, e.g., as further described at paragraph 0051 of the present application, where the soil or other particulate material serving as infill is prevented from blowing away during wind storms. This is also provided by the free length of the ribbons folding over on top of the infill material between the rows. It is noted that the free length of ribbon overlap by about 18% will encapsulate the infill.

With respect to claim 13, a formula is presented showing that, when "A" is the width of the spacing between the rows of the ribbons, and "L" is the length of the ribbons $2A \leq L$, or twice the dimension of the spacing between the rows, while the thickness "T" is substantially $2/3$ the length "L" of the ribbons. Again, Prevost ('158) did not teach or suggest this interrelationship.

With respect to the rejection based upon Tomarin, the Examiner states that Tomarin discloses a sports playing field made of a synthetic grass surface which comprises a flexible backing member, parallel rows of synthetic ribbons representing blades of grass projecting upwardly from the backing members and forming rows of ribbons. The Examiner also states that Fig. 1 shows the particulate layer having a thickness of substantially $2/3$ the length of the ribbons. However, the Examiner is reminded that the drawings in Tomarin

have not been indicated as being drawn to scale. Applicant submits that it is has long been established in U.S. Patent Law that it is improper to treat drawings as being drawn to scale when they have not been indicated as being drawn to scale within the written description (or the drawings themselves).

Further, Tomarin teaches against the interpretation alleged by the Examiner. The Examiner points to column 2 lines 57-62 and column 3, lines 18-25 when referring to the spacing between the rows. However, in Tomarin, the "welts" are said to be $1/8$ of an inch spacing, while the rows are said to be $1/4$ of an inch apart. As seen in Figs. 2 and 3, where Fig. 2 is a cross-section along lines 2-2 of Fig. 3, the bight portion of the strands 17 extend transversely to the direction of the rows, so the $1/8$ " spacing is between the welts in a single row. The actual spacing between the rows is significantly smaller than the claimed invention, e.g., as stated in Tomarin, $1/4$ inch.

Tomarin, therefore, does not propose a synthetic turf where the spacing of the rows can be varied, as suggested in the Prevost '158 Patent and in the claimed invention. Further, the strands of Tomarin will be about an inch, or four times the row spacing. Moreover, the length of the ribbons in Tomarin will not vary proportionally to the spacing between the rows if the rows are varied because of the nature of the field. Finally, Tomarin does not suggest that the infill will be $2/3$ of the length of the ribbons, and that as a result of this ratio, the infill will also vary proportionally to the varying width of the spacing

between the rows and the varying height of the ribbons. Accordingly, Applicant respectfully submits that neither the Tomarin or Prevost references teach or suggest the specific interrelationship (between A, L and T) claimed in claims 1 and 13. Accordingly, these rejections should be withdrawn.

As to the dependent claims, Applicant respectfully submits that these claims are allowable due to their dependence upon an allowable independent claim, as well as for additional limitations provided by these claims.

Claim Rejections Under 35 U.S.C. § 103

Claims 18-20 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tomarin (U.S. Patent No. 4,637,942) in view of Rutherford, Sr. (U.S. Patent No. 5,794,861). Claims 7-12, 15, 17-20 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Prevost (CA 2,095,158) in view of Rutherford, Sr., and further in view of Haas, Jr. (Canadian Patent No. 1,182,484). These rejections are respectfully traversed.

In light of the foregoing amendments to the claims, Applicant submits that these rejections have been obviated and/or rendered moot. As discussed in greater detail hereinabove, Applicant submits that the prior art of record fails to teach or suggest each and every limitation of the unique combination of limitations of the claimed invention. Accordingly, these rejections should be withdrawn.

In addition, Applicant submits that it would not have been obvious to one of ordinary skill in the art to alter the teachings of Tomarin and/or Prevost as alleged by the Examiner. For example, the Examiner has indicated that Rutherford teaches how to produce recycled ground rubber by subjecting vehicle tires to cryogenic fluids. However, Rutherford does not teach or suggest any reason for using a cryogenic rubber in the environment of synthetic turf. The Examiner indicates that Rutherford is directed to a process to form cryogenic rubber, so-called, but Rutherford did not anticipate the benefits of using such cryogenic rubber in a synthetic turf environment for the reasons described in the present application, e.g., in relation to drainage in synthetic turfs.

In accordance with the above discussion of the patents relied upon by the Examiner, Applicants respectfully submit that these documents, either in combination together or standing alone, fail to teach or suggest the invention as is set forth by the claims of the instant application.

Accordingly, reconsideration and withdrawal of the claim rejection are respectfully requested. Moreover, the Applicants respectfully submit that the instant application is in a condition for allowance.

As to the dependent claims, Applicants respectfully submit that these claims are allowable due to their dependence upon an allowable independent claim, as well as for additional limitations provided by these claims.

CONCLUSION

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state-of-the-art, no further comments are necessary with respect thereto.

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Matthew T. Shanley, Registration No. 47,074 at (703) 205-8000 in the Washington, D.C. area.

Applicant respectfully petitions under the provisions of 37 C.F.R. § 1.136(a) and § 1.17 for a one-month extension of time in which to respond to the Examiner's Office Action. The Extension of Time Fee in the amount of **\$55.00** is attached hereto.

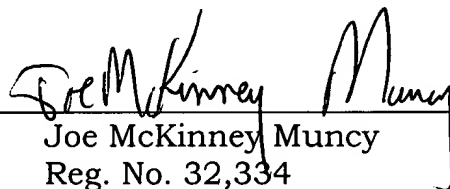
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Art Unit 1775

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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MARKED-UP VERSION OF AMENDMENTS

IN THE CLAIMS:

Claim 3 has been cancelled.

The claim has been amended as follows:

1. (Amended) A synthetic surface having a flexible backing member, parallel rows of synthetic ribbons, representing blades of grass, projecting upwardly from the backing member, the rows of ribbons spaced apart from each other from between 5/8 inch and 2-1/4 inches, and the length of the ribbons, extending upwardly from the backing member, is at least twice the dimension of the spacing between the rows of ribbons, the surface including a relatively thick layer of particulate material on the backing member supporting the ribbons in a relatively upright position relative to the backing member, wherein the particulate layer has a thickness of substantially two-thirds the length of the ribbons.